

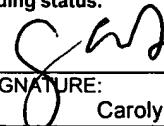
Approved for use through 03/31/2007. OMB 0651-0021

U. S. Patent and Trademark Office; U. S. DEPARTMENT OF COMMERCE

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<b>TRANSMITTAL LETTER TO THE UNITED STATES DESIGNATED/ELECTED OFFICE (DO/EO/US) CONCERNING A SUBMISSION UNDER 35 U.S.C. 371</b>		ATTORNEY'S DOCKET NUMBER 246152024900
INTERNATIONAL APPLICATION NO. PCT/EPO3/008216	INTERNATIONAL FILING DATE 25 July 2003	U.S. APPLICATION NO. (If known, see 37 CFR 1.5) 10/522,389
TITLE OF INVENTION     GENES FROM PROPIONIBACTERIUM FREUDENREICHII ENCODING ENZYMES INVOLVED IN VITAMIN B12 BIOSYNTHESIS		
APPLICANT(S) FOR DO/EO/US     Herman J. PEL et al.		
Applicant herewith submits to the United States Designated/Elected Office (DO/EO/US) the following items and other information:		
<p>1. <input type="checkbox"/> This is a <b>FIRST</b> submission of items concerning a submission under 35 U.S.C. 371.</p> <p>2. <input checked="" type="checkbox"/> This is a <b>SECOND</b> or <b>SUBSEQUENT</b> submission of items concerning a submission under 35 U.S.C. 371.</p> <p>3. <input type="checkbox"/> This is an express request to begin national examination procedures (35 U.S.C. 371 (f)). The submission must include items (5), (6), (9) and (21) indicated below.</p> <p>4. <input type="checkbox"/> The US has been elected (Article 31).</p> <p>5. <input type="checkbox"/> A copy of the International Application as filed (35 U.S.C. 371 (c)(2))</p> <p>a. <input type="checkbox"/> is attached hereto (required only if not communicated by the International Bureau).</p> <p>b. <input type="checkbox"/> has been communicated by the International Bureau.</p> <p>c. <input type="checkbox"/> is not required, as the application was filed in the United States Receiving Office (RO/US).</p> <p>6. <input type="checkbox"/> An English language translation of the International Application as filed (35 U.S.C. 371 (c)(2)).</p> <p>a. <input type="checkbox"/> is attached hereto.</p> <p>b. <input type="checkbox"/> has been previously submitted under 35 U.S.C. 154(d)(4).</p> <p>7. <input type="checkbox"/> Amendments to the claims of the International Application under PCT Article 19 (35 U.S.C. 371 (c)(3))</p> <p>a. <input type="checkbox"/> are attached hereto (required only if not communicated by the International Bureau).</p> <p>b. <input type="checkbox"/> have been communicated by the International Bureau.</p> <p>c. <input type="checkbox"/> have not been made; however, the time limit for making such amendments has NOT expired.</p> <p>d. <input type="checkbox"/> have not been made and will not be made.</p> <p>8. <input type="checkbox"/> An English language translation of the amendments to the claims under PCT Article 19 (35 U.S.C. 371 (c)(3)).</p> <p>9. <input type="checkbox"/> An oath or declaration of the inventor(s) (35 U.S.C. 371 (c)(4)).</p> <p>10. <input type="checkbox"/> An English language translation of the annexes of the International Preliminary Examination Report under PCT Article 36 (35 U.S.C. 371 (c)(5)).</p>		
Items 11 to 20 below concern document(s) or information included:		
<p>11. <input checked="" type="checkbox"/> An Information Disclosure Statement under 37 CFR 1.97 and 1.98(3 pages).</p> <p>12. <input type="checkbox"/> An assignment document for recording. A separate cover sheet in compliance with 37 CFR 3.28 and 3.31 is included.</p> <p>13. <input type="checkbox"/> A preliminary amendment.</p> <p>14. <input type="checkbox"/> An Application Data Sheet under 37 CFR 1.76.</p> <p>15. <input type="checkbox"/> A substitute specification.</p> <p>16. <input type="checkbox"/> A power of attorney and/or change of address letter.</p> <p>17. <input type="checkbox"/> A computer-readable form of the sequence listing in accordance with PCT Rule 13ter.2 and 37 CFR 1.821 - 1.825.</p> <p>18. <input type="checkbox"/> A second copy of the published International Application under 35 U.S.C. 154(d)(4).</p> <p>19. <input type="checkbox"/> A second copy of the English language translation of the international application under 35 U.S.C. 154(d)(4).</p> <p>20. <input checked="" type="checkbox"/> Other items or information: Form PTO/SB/08a/b (2 pages + duplicate); 25 References; Return Receipt Postcard.</p>		

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U.S. APPLICATION NO. (if known, see 37 CFR 1.5) 10/522,389		INTERNATIONAL APPLICATION NO. PCT/EPO3/008216		ATTORNEY'S DOCKET NUMBER 246152024900	
The following fees have been submitted				CALCULATIONS	PTO USE ONLY
21. <input type="checkbox"/> Basic national fee ..... \$300				\$	
22. <input type="checkbox"/> Examination fee If International preliminary examination report prepared by USPTO and all claims satisfy provisions of PCT Article 33(1)-(4) ..... \$100 All other situations ..... \$200					
23. <input type="checkbox"/> Search fee Search fee (37 CFR 1.445(a)(2)) has been paid on the international application to the USPTO as an International Searching Authority ..... \$100 International Search Report prepared and provided to the Office ..... \$400 All other situations ..... \$500				\$	
TOTAL OF 21, 22 and 23 =				\$ 0.00	
<input type="checkbox"/> Additional fee for specification and drawings filed in paper over 100 sheets (excluding sequence listing or computer program listing filed in an electronic medium). The fee is \$250 for each additional 50 sheets of paper or fraction thereof.					
Total Sheets	Extra sheets	Number of each additional 50 or fraction thereof (round up to a whole number)	RATE		
- 100 =	/50 =		x \$250.00		
Surcharge of \$130.00 for furnishing the oath or declaration later than 30 months from the earliest claimed priority date (37 CFR 1.492 (e)).				\$	
CLAIMS		NUMBER FILED	NUMBER EXTRA	RATE	
Total claims		- 20 =	x	\$	
Independent claims		- 3 =	x	\$	
MULTIPLE DEPENDENT CLAIM(s) (if applicable)			+	\$	
TOTAL OF ABOVE CALCULATIONS =				\$ 0.00	
<input type="checkbox"/> Applicant claims small entity status. See 37 CFR 1.27. Fees above are reduced by ½.				\$	
SUBTOTAL =				\$ 0.00	
Processing fee of \$130.00 for furnishing the English translation later than 30 months from the earliest claimed priority date (37 CFR 1.492 (f)).				\$	
TOTAL NATIONAL FEE =				\$ 0.00	
Fee for recording the enclosed assignment (37 CFR 1.21 (h)). The assignment must be accompanied by an appropriate cover sheet (37 CFR 3.28, 3.31). \$40.00 per property				\$	
TOTAL FEES ENCLOSED =				\$ 0.00	
				Amount to be refunded:	\$
				Amount to be charged:	\$
<p>a. <input type="checkbox"/> A check in the amount of \$ _____ to cover the above fees is enclosed.</p> <p>b. <input type="checkbox"/> Please charge my Deposit Account No. _____ in the amount of \$ 0.00 to cover the above fees. A duplicate copy of this sheet is enclosed.</p> <p>c. <input checked="" type="checkbox"/> The Commissioner is hereby authorized to charge any additional fees which may be required, or credit any overpayment to Deposit Account No. 03-1952. A duplicate copy of this sheet is enclosed.</p> <p>d. <input type="checkbox"/> Fees are to be charged to a credit card. <b>WARNING:</b> Information on this form may become public. <b>Credit card information should not be included on this form.</b> Provide credit card information and authorization on PTO-2038.</p>					
NOTE: Where an appropriate time limit under 37 CFR 1.495 has not been met, a petition to revive (37 CFR 1.137 (a) or (b)) must be filed and granted to restore the International Application to pending status.					
SEND ALL CORRESPONDENCE TO:					
<p>Carolyn A. Favorito Morrison &amp; Foerster LLP 3811 Valley Centre Drive - Suite 500 San Diego, CA 92130-2332</p> <p>CUSTOMER NUMBER: 25225</p>					
<p>SIGNATURE:  Carolyn A. Favorito</p> <p>REGISTRATION NUMBER: 39,183</p>					

I hereby certify that this correspondence is being deposited with the U.S. Postal Service with sufficient postage as First Class Mail in an envelope addressed to: MS PCT, Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450, on the date shown below.

Dated: 5-18-05

Signature:  (Rhea Amid)

I hereby certify that this correspondence is being deposited with the U.S. Postal Service with sufficient postage as First Class Mail, in an envelope addressed to: MS PCT, Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450, on the date shown below.

Dated: 5-18-05 Signature:   
(Rhea Amid)

PATENT  
Docket No. 246152024900

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re Patent Application of:  
Herman J. PEL et al.

Serial No.: 10/522,389

Filing Date (Int'l): July 25, 2003

For: GENES FROM PROPIONIBACTERIUM  
FREUDENREICHII ENCODING  
ENZYMES INVOLVED IN VITAMIN  
B12 BIOSYNTHESIS

Examiner: Not Yet Assigned

Group Art Unit: Not Yet Assigned

**INFORMATION DISCLOSURE  
STATEMENT UNDER 37 C.F.R. § 1.97 & 1.98**

MS PCT  
Commissioner for Patents  
P.O. Box 1450  
Alexandria, Virginia 22313-1450

Dear Sir:

Pursuant to 37 C.F.R. § 1.97 and § 1.98, Applicants submit for consideration in the above-identified application the documents listed on the attached Form PTO/SB/08a/b. Copies of the documents are also submitted herewith. The Examiner is requested to make these documents of record.

The document numbers 8, 16, 17, 19, 20, 21, 23, 24, and 25 listed on the attached Form PTO/SB/08a/b were cited in an International Search Report mailed on December 22, 2003 (copy attached) directed to a counterpart international or foreign application.

This Information Disclosure Statement is submitted:

- With the application; accordingly, no fee or separate requirements are required.
- Before the mailing of a first Office Action after the filing of a Request for Continued Examination under § 1.114. However, if applicable, a certification under 37 C.F.R. § 1.97 (e)(1) has been provided.
- Within three months of the application filing date or before mailing of a first Office Action on the merits; accordingly, no fee or separate requirements are required. However, if applicable, a certification under 37 C.F.R. § 1.97 (e)(1) has been provided.
- After receipt of a first Office Action on the merits but before mailing of a final Office Action or Notice of Allowance.
  - A fee is required. A check in the amount of \_\_ is enclosed.
  - A fee is required. Accordingly, a Fee Transmittal form (PTO/SB/17) is attached to this submission in duplicate.
  - A Certification under 37 C.F.R. § 1.97(e) is provided above; accordingly; no fee is believed to be due.
- After mailing of a final Office Action or Notice of Allowance, but before payment of the issue fee.
  - A Certification under 37 C.F.R. § 1.97(e) is provided above and a check in the amount of \_\_ is enclosed.
  - A Certification under 37 C.F.R. § 1.97(e) is provided above and a Fee Transmittal form (PTO/SB/17 is attached to this submission in duplicate.)

Applicants would appreciate the Examiner initialing and returning the Form PTO/SB/08a/b, indicating that the information has been considered and made of record herein.

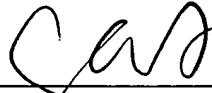
The information contained in this Information Disclosure Statement under 37 C.F.R. § 1.97 and § 1.98 is not to be construed as a representation that: (i) a complete search has been made; (ii) additional information material to the examination of this application does not exist;

(iii) the information, protocols, results and the like reported by third parties are accurate or enabling; or (iv) the above information constitutes prior art to the subject invention.

In the unlikely event that the transmittal form is separated from this document and the Patent Office determines that an extension and/or other relief (such as payment of a fee under 37 C.F.R. § 1.17 (p)) is required, Applicants petition for any required relief including extensions of time and authorize the Commissioner to charge the cost of such petitions and/or other fees due in connection with the filing of this document to **Deposit Account No. 03-1952** referencing **246152024900**. However, the Commissioner is not authorized to charge the cost of the issue fee to the Deposit Account.

Dated: May 17, 2005

Respectfully submitted,

By   
Carolyn A. Favorito  
Registration No.: 39,183  
MORRISON & FOERSTER LLP  
3811 Valley Centre Drive, Suite 500  
San Diego, California 92130  
(858) 720-5195

Substitute for form 1449/PTO				Complete if Known	
<b>INFORMATION DISCLOSURE STATEMENT BY APPLICANT</b>				Application Number	10/522,389
(Use as many sheets as necessary)				Filing Date (Int'l)	July 25, 2003
				First Named Inventor	Herman J. PEL
				Art Unit	Not Yet Assigned
				Examiner Name	Not Yet Assigned
Sheet	1	of	2	Attorney Docket Number	246152024900

U.S. PATENT DOCUMENTS					
Examiner Initials*	Cite No. <sup>1</sup>	Document Number	Publication Date	Name of Patentee or Applicant of Cited Document	Pages, Columns, Lines, Where Relevant Passages or Relevant Figures Appear
		Number-Kind Code <sup>2</sup> (if known)	MM-DD-YYYY		

FOREIGN PATENT DOCUMENTS					
Examiner Initials*	Cite No. <sup>1</sup>	Foreign Patent Document	Publication Date	Name of Patentee or Applicant of Cited Document	Pages, Columns, Lines, Where Relevant Passages or Relevant Figures Appear
		Country Code <sup>3</sup> -Number <sup>4</sup> -Kind Code <sup>5</sup> (if known)	MM-DD-YYYY		
1.	EP-0 096 430	12-21-1983	GIST BROCADES NV		
2.	EP-0 134 048	03-13-1985	GIST BROCADES NV		
3.	EP-0 184 483	06-11-1986	THOMSON-CSF		
4.	EP-0 253 455	01-20-1988	GIST BROCADES NV		
5.	EP-0 284 603	10-05-1988	GIST BROCADES NV		
6.	EP-0 301 670	02-01-1989	GIST BROCADES NV		
7.	EP-0 635 574	01-25-1995	DSM NV		
8.	WO-91/11518	08-08-1991	RHONE POULENC BIOCHIM		
9.	WO-97/43421	11-20-1997	BECKER		
10.	WO-98/04726	02-05-1998	COFFIN		
11.	WO-98/06868	02-19-1998	GIST BROCADES NV		
12.	WO-98/30707	07-16-1998	COFFIN		
13.	WO-98/46772	10-22-1998	SELTEN		
14.	WO-99/32617	07-01-1999	GIST BROCADES NV		
15.	WO-99/67356	12-29-1999	POUWELS		
16.	WO-01/19993	03-22-2001	US GOV		

\*EXAMINER: Initial if information considered, whether or not citation is in conformance with MPEP 609. Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant. <sup>1</sup> Applicant's unique citation designation number (optional). <sup>2</sup> See Kinds Codes of USPTO Patent Documents at [www.uspto.gov](http://www.uspto.gov) or MPEP 901.04. <sup>3</sup> Enter Office that issued the document, by the two-letter code (WIPO Standard ST.3). <sup>4</sup> For Japanese patent documents, the indication of the year of the reign of the Emperor must precede the serial number of the patent document. <sup>5</sup> Kind of document by the appropriate symbols as indicated on the document under WIPO Standard ST. 16 if possible. <sup>6</sup> Applicant is to place a check mark here if English language Translation is attached.

NON PATENT LITERATURE DOCUMENTS		
Examiner Initials	Cite No. <sup>1</sup>	Include name of the author (in CAPITAL LETTERS), title of the article (when appropriate), title of the item (book, magazine, journal, serial, symposium, catalog, etc.), date, page(s), volume-issue number(s), publisher, city and/or country where published.
	17.	BLANCHE et al., Angew. Chem. Int. Ed. Engl. (1995) 34:383-411
	18.	CAMERON et al., J. Bacteriol. (1989) 171:547-557
	19.	COLE et al., Nature (1998) 393:537-544
	20.	Database EMBL 'Online,' May 2, 2001, FLEISCHMANN et al., Accession No. AE007116 XP002217287
	21.	Database EMBL 'Online,' July 5, 2002, Accession No. A30215
	22.	International Search Report for PCT/EP03/08216, mailed on December 22, 2003, 6 pages
	23.	POLLICH et al., J. of Bacteriology (1995) 177:4481-4487

Examiner Signature		Date Considered	
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Substitute for form 1449/PTO				<i>Complete if Known</i>	
				Application Number	10/522,389
				Filing Date (Int'l)	July 25, 2003
				First Named Inventor	Herman J. PEL
				Art Unit	Not Yet Assigned
				Examiner Name	Not Yet Assigned
Sheet	2	of	2	Attorney Docket Number	246152024900

24.	ROESSNER et al., Microbiology (2002) 148:1845-1853	
25.	SATTLER et al., J. of Bacteriology (1995) 177:1564-1569	

\*EXAMINER: Initial if information considered, whether or not citation is in conformance with MPEP 609. Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant.

<sup>1</sup>Applicant's unique citation designation number (optional). <sup>2</sup>Applicant is to place a check mark here if English language Translation is attached.

Examiner Signature		Date Considered	
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sd- 246126